

**PEST MANAGEMENT GRANTS --  
DEMONSTRATION FINAL REPORT**

**Contract Number:** #01-0200C

**Contract Title:** Reduced Risk Vineyard Practices-Demonstration and Outreach by the Central Coast Vineyard Team

**Principle Investigator:** Kris O'Connor, Central Coast Vineyard Team

**Contract Organization:** Central Coast Vineyard Team

**Date:** March 20, 2003

***Prepared for the Department of Pesticide Regulation***

## **DISCLAIMER**

The statements and conclusions in this report are those of the contractor and not necessarily those of the California Department of Pesticide Regulation. The mention of commercial products, their source, or their use in connection with material reported herein is not to be construed as actual or implied endorsement of such products.

## ACKNOWLEDGEMENTS

Project coordinator would like to thank several people for their continued commitment to CCVT's work on the Central Coast.

*Meeting Host Growers:* Kevin Merrill, Don Ackerman, Robert Guillen, Greg Baldwin, Rob Murray, Daryl Salm, Mark Fahey, Jeff Newton, Steve Carter, Daver Severson, Steve DiGangi, Chris Hammell, Erin Amaral, Andy Mitchell, Steve Cobb, Craig Wyatt, Tavo Acosta, and Dan Connors. This was clearly the most aggressive year in terms of field demonstrations. Without their willingness to share their time, facilities, equipment and expertise, CCVT would not have an outreach and education program.

*Technical Advisors:* Larry Bettiga (UCCE), Mark Battany (UCCE), Keith Patterson (Cal Poly San Luis Obispo), Monica Barricarte (Cachuma RCD), Roh Whitehurst (Rincon-Vitova Insectary). Some of these individuals have participated with CCVT for several years, others are new to CCVT outreach. They participate with CCVT's outreach program in addition to providing valuable input regarding direction, topics, and technical issues in addition to facilitating the Spanish program.

*Cooperating Growers:* This group is too large acknowledge individually. Special thanks to growers who continue to participate in the Positive Points System process. They represent the foundation of this innovative program.

*CCVT Members:* Paid membership to the Central Coast Vineyard Team continues to increase and expand. Financial support from local industry is critical for the group's long-term success.

*Local Industry Organizations:* Thanks to the California Association of Winegrape Growers, Monterey County Vintners and Growers Association, Paso Robles Vintners and Growers Association and the Central Coast Winegrowers Association. Each organization cooperates fully with CCVT in advertising and participating with various aspects of this project. Their participation promotes greater attendance at each of the meetings and allows CCVT to reach a greater audience.

This report was submitted in fulfillment of #01-0200C "*Reduced Risk Vineyard Practices-Demonstration and Outreach by the Central Coast Vineyard Team*" by the Central Coast Vineyard Team under the partial sponsorship of the California Department of Pesticide Regulation. Work was completed as of February 28, 2003.

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## **EXECUTIVE SUMMARY**

The Central Coast Vineyard Team (CCVT) is a grower group whose mission is to promote sustainable vineyard practices on the Central Coast. CCVT members own or manage over 35,000 acres of winegrapes in Monterey, San Luis Obispo, and Santa Barbara Counties

CCVT developed the Positive Points System (PPS) that represents a model vineyard that integrates soil, water, pest, and viticultural practices. The PPS vineyard is less dependent on chemical inputs since it relies on balanced biological systems. The PPS promotes voluntary adoption of reduced risk pest management systems. While previous work focused on refining the PPS as an assessment tool, this project uses the tool as a foundation for demonstration and outreach that targets a significant number of growers on the Central Coast.

The objectives for this project are as follows:

### **Objective 1. Demonstrate reduced risk practices being successfully used by local growers.**

CCVT held 20 meetings throughout the Central Coast addressing several sustainable practices: sulfur BMP's, floor management alternatives, atmometers for irrigation scheduling, beneficial pest identification, irrigation troubleshooting, and mealybug biology. 415 people attended these meetings representing 111,000 acres. Of these, 225 were Spanish speaking workers representing 68,000 acres. In addition, CCVT participated and/or hosted three tours during this project period in Santa Barbara and San Luis Obispo Counties. Tour participants included growers, wineries, consultants, regulators, and legislators.

### **Objective 2. Disseminate information to growers regarding reduced risk practices used on the Central Coast.**

CCVT developed and distributed approximately 1,000 newsletters to its entire mailing list on a quarterly basis. Newsletters addressed project details, grower testimonials and educational event information. In addition, CCVT hosted a Mealybug Roundtable on August 29, 2002 where 12 grower participants exchanged ideas with CCVT staff and UCCE farm advisors and researchers regarding upcoming vine mealybug challenges. CCVT also facilitated an Educational Event in Shell Beach on November 22, 2002 that highlighted Biologically Integrated Farming Systems and attracted approximately 100 participants. CCVT participated in 17 industry events that reached approximately 1,200 people and published nine columns and articles in ag focused publications throughout the year.

### **Objective. 3. Document changes in sustainable practices used in Central Coast Vineyards.**

CCVT conducted three Positive Points System workshops and collected 76 evaluations this year. Acreage managed by those completing PPS evaluations exceeds 54,000 for 2002. Data indicate that continuing growers have higher scores than first year growers and that the overall scores are increasing at a site over time.

The funding provided by the Department of Pesticide Regulation has allowed the Central Coast Vineyard Team to become an institution within the winegrape industry. The substantive demonstration, outreach, and education programs have retained and attracted a large audience of winegrape growers that manage or own significant acreage on the Central Coast (50%). Currently there is sufficient programming to attract increasing amount of private industry support in the form of donations and memberships. Even though the DPR funding ends for CCVT at this point, CCVT will continue to offer progressive programs to educate and guide growers towards more sustainable and reduced-risk practices.

## FINAL REPORT

### Introduction

#### ***Objective 1. Demonstrate reduced risk practices being successfully used by local growers.***

- 1.1 Conduct Quarterly Tailgate Meetings in each County.
- 1.2 Develop educational materials for Tailgate Meetings.
- 1.3 Document use of reduced risk practices being used on the Central Coast (via on-site visits).
- 1.4 Conduct management meetings and “Forums” to address practices, special issues and/or planning strategies.

#### ***Objective 2. Disseminate information regarding reduced risk practices to winegrape growers***

- 2.1 Develop and distribute quarterly newsletters
- 2.2 Contribute materials or other group’s newsletters
- 2.3 Publish articles in industry publications
- 2.4 Give presentations at industry meetings
- 2.5 Update CCVT website.

#### ***Objective 3. Document changes in sustainable practices used in Central Coast Vineyards***

- 3.1 Use the Positive Points System to evaluate blocks.
- 3.2 Analyze data to determine trends and issues.

### Results

#### **1.1 Tailgate Meetings**

CCVT conducted 17 Tailgate Meetings during this project period (Table 1). Meetings addressed and demonstrated specific practices regarding sulfur safety, falconry for bird control, mechanical weed management, using atmometers for irrigation scheduling, pest identification, troubleshooting irrigation systems, erosion control, and irrigation readiness. Of these meetings, the sulfur, pest, and irrigation meetings were conducted in Spanish. Of the 415 attendees, 225 were traditionally underrepresented.

Table 1. Tailgate Meetings for March 1, 2002 – February 28, 2003.

Meeting	Language	Date	Acres	Total Attending	Trad Underrep
Sulfur	Spanish	3/12/2002	5,678	98	98
Sulfur	Spanish	3/12/2002	5,000	25	25
Sulfur	Spanish	3/15/2002	6,307	23	23
Falconry	English	5/20/2002	18,270	17	
Falconry	English	5/14/2002			
Reduced Risk Floor Management Strategies	English	6/11/2002	5,000	31	
Using Atmometers for Irrigation Scheduling	English	6/12/2002	5,000	12	

Meeting	Language	Date	Acres	Total Attending	Trad Underrep
Using Atmometers for Irrigation Scheduling	English	6/12/2002	2,257	11	
Using Atmometers for Irrigation Scheduling	English	6/13/2002	12,100	30	
Pest Identification	Bilingual	7/18/2002	5,000	7	
Pest Identification	Bilingual	7/19/2002	595	19	
Pest Identification	Bilingual	7/22/2002	9,000	23	
Irrigation Troubleshooting	Spanish	7/26/2002	8,505	8	8
Irrigation Troubleshooting	Spanish	7/30/2002	950	10	10
Winter Preparedness	English	11/7/2002	?	40	40
Spring Irrigation Readiness	Spanish	2/25/2003	12,900	18	18
Spring Irrigation Readiness	Spanish	2/27/2003	9,436	27	27
Spring Irrigation Readiness	Spanish	2/26/2003	5,538	16	16
			111,536	415	225

A majority of those attending tailgate meetings are not paid CCVT members (i.e., tailgate meetings reach beyond CCVT membership). Each meeting had both new growers to attend and growers who had previously participated in CCVT activities. CCVT continues to reach new growers and keeps the attention of those who have attended before. In addition, we are seeing different staff members attending meetings (i.e., companies see value in meetings and are sending additional staff to attend). Also, some of the growers are inviting and bringing their foremen to meetings. Meetings were advertised via newsletters, local press, emails, announcements, and other industry mailings.

## **1.2 Develop educational materials**

Materials were developed for each Tailgate. Information about a grower's particular practice, record-keeping system, farming approach, equipment, etc. was provided. In addition, a CCVT brochure was translated into Spanish for the Spanish-speaking meeting.

## **1.3 Document use of reduced risk practices**

Managers for tailgate meeting sites were contacted and interviewed prior to the meetings. Information regarding their practices was gathered and collected in order to be distributed via newsletters, presentations, and handouts.

## **1.4 Conduct management meetings and forums**

Twelve advisory meetings were conducted through the year. CCVT developed technical advisory committees regarding technical aspects and outreach. This meeting process has been formalized and is being used to plan and evaluate CCVT's programs. In addition, Board meetings provide venues for discussing various issues and program activities.

## **Objective 2. Disseminate information regarding reduced risk practices to winegrape growers.**

### **2.1 Newsletters**

CCVT developed and distributed quarterly newsletters. Approximately 1000 newsletters were developed and distributed to the entire CCVT mailing list. Additional newsletters were distributed at other events. Newsletters contain information on growers' practices, Tailgate Meetings, events, membership, and technical information. CCVT redesigned and expanded the newsletter in Fall 2003 to include additional technical information. In addition, CCVT will be using regular articles from Cal Poly, Cooperative Extension, and other technical advisors.

### **2.2 Contribute materials to other group's newsletters**

Because of the expanded work in Task 2.3 and 2.4, CCVT did not contribute to other regional group's newsletters. The scope of work for 2.3 and 2.4 increased dramatically this year, and CCVT board decided that non-CCVT members were being reached through presentations and broader industry publications.

### **2.3 Publish articles**

CCVT developed relationships with the Wines and Vines Editorial staff in order to submit regular articles to the publication. This year, four articles appeared in Wines and Vines (Table 2). Articles also appeared in the SAREP newsletter, the Californian, and American Vineyard. In addition, several articles appeared in regional newspapers. These articles addressed CCVT's spanish speaking meetings, demonstration projects, and other issues. CCVT continues to place articles in industry publications. This March, another article appeared in Practical Winery and Vineyard.

Table 2. Description and circulation of CCVT articles published in industry magazines.

Article Title	Publication	Date	Circulation
SAREP Funds Expansion	SAREP Newsletter	4 / 1 / 2002	3,200
Mulch Application Article	Wines and Vines	6 / 1 / 2002	4,000
Composting Article	Wines and Vines	8 / 1 / 2002	4,000
Legislative Article	Wines and Vines	10/1 / 2002	4,000
CCVT Stresses Adaptability	The Californian	10/7 / 2002	19,000
Officials Visit Central Coast Vineyard	American Vineyard	11/15/2002	11,000
Bilingual Tailgates	Wines and Vines	12/2 / 2002	4,000
Total			49,200

### **2.4 Give presentations**

CCVT members and staff participated with 20 industry events throughout the State during this period (Table 3). Participation involved giving presentations, participating in speakers panels, or providing educational materials at a booth. A conservative estimate for those attending is 1,269 participants. In addition, CCVT facilitated three vineyard tours involving regulators, growers, and legislators. CCVT also participated with several

community events that conservatively reached 915 people. (i.e., vintners festivals, creek days, etc.) (Table 4).

Table 3. CCVT participation in non-CCVT sponsored industry events.

Event	County	Date	Presentation?	Panel?	Booth?	Total Attendance
CSU Fresno Vit & Enology	Santa Barbara	3/14/2002	No	No	Yes	150
Sustainable Grape Day	Fresno	6/6/2002	No	No	Yes	100
PRVGA Water Symposium	San Luis Obispo	6/14/2002	Yes	Yes	No	30
SLO Vintners Board	San Luis Obispo	6/26/2002	Yes	No	No	30
Clarksburg Growers	San Joaquin	6/28/2002	Yes	No	No	5
MCVGA Growers Meeting	Monterey	7/9/2002	Yes	No	No	10
Finding the Right Blend	San Luis Obispo	7/17/2002	Yes	Yes	Yes	60
Ag Symposium	San Luis Obispo	11/1/2002	Yes	Yes	Yes	50
Grape Expo	San Luis Obispo	11/15/2002	Yes	No	Yes	200
Wine Industry Conference	San Luis Obispo	11/21/2002	No	No	No	50
AAIE Grape Meeting	San Luis Obispo	12/5/2002	No	No	Yes	20
CASAP Conference	Monterey	1/18/2003	Yes	No	Yes	52
Unified	Other	1/28/2003	No	Yes	Yes	500
AAIE Conference	San Luis Obispo	2/4/2003	Yes	No	Yes	30
Estrella Watershed	San Luis Obispo	2/19/2003	Yes	No	No	30
Ag Commissioner Mtg	San Luis Obispo	2/24/2003	Yes	No	No	12
						1,269

Table 4. CCVT participation at community events.

Event	County	Date	Presentation?	Panel?	Booth?	Attendance
Sustainable Fisheries	Monterey	5/17/2002	Yes	Yes	Yes	100
Paso Vintners Festival	San Luis Obispo	5/18/2002	No	No	Yes	100
SLO Leadership Forum	San Luis Obispo	7/12/2002	Yes	Yes	No	40
KCBX Wine Classic	San Luis Obispo	7/14/2002	No	No	Yes	100
Mid State Fair Grape Escape	San Luis Obispo	7/25/2002	No	No	Yes	100

Event	County	Date	Presentation?	Panel?	Booth?	Attendance
Voice of Santa Barbara	Santa Barbara	7/29/2002	Yes	No	No	?
Heard it through the Grapevine	Santa Barbara	8/7/2002	Yes	No	No	100
MCVGA Winemakers Celebration	Monterey	8/10/2002	No	No	Yes	100
Arroyo Grande Creek Days	San Luis Obispo	10/12/2002	No	No	Yes	75
SBVGA Harvest Festival	Santa Barbara	10/12/2002	No	No	Yes	100
Nipomo Creek Day	San Luis Obispo	10/15/2002	No	No	Yes	50
Grand National Rodeo	San Francisco	10/24/2002	No	No	Yes	50
						915

## 2.5 Website

CCVT continued to provide information on its website ([www.vineyardteam.org](http://www.vineyardteam.org)). Schedule of events, grower testimonials, newsletter, and membership information was uploaded on a quarterly basis. CCVT is in the process of redesigning the website to accommodate its changing need for information exchange (Figure 1).



Figure 1. Central Coast Vineyard Team website ([www.vineyardteam.org](http://www.vineyardteam.org)).

### Objective 3. Document changes in sustainable practices used in Central Coast Vineyards.

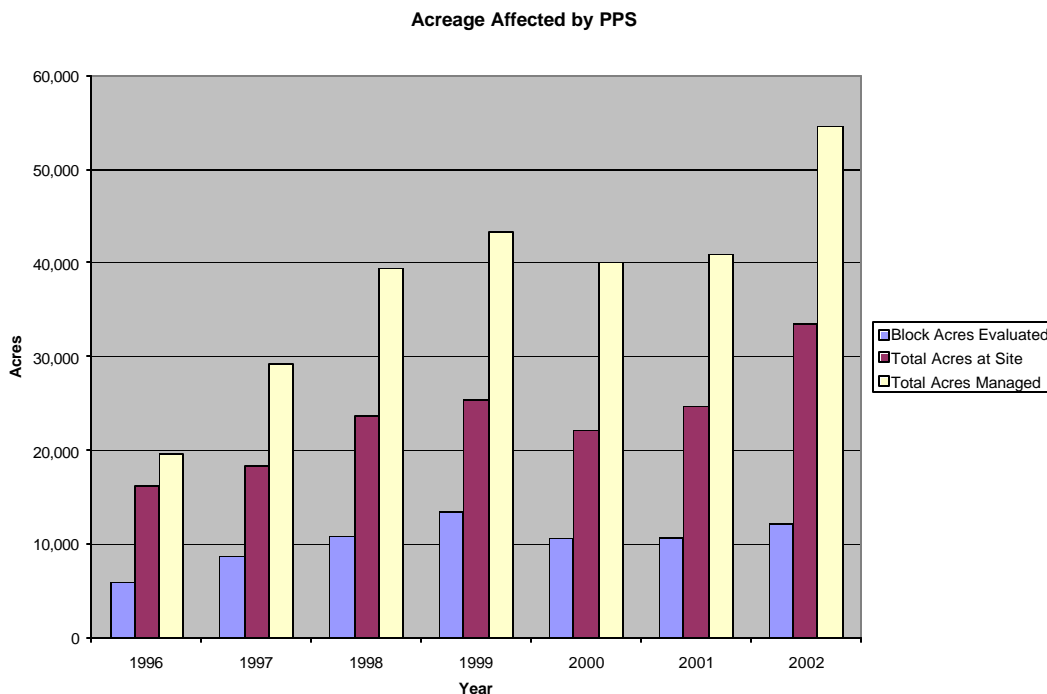
#### 3.1 Evaluate practices using the PPS

CCVT continues to increase participation in the Positive Point System process. CCVT collected 76 evaluations for the 2003 season (Table 5). Of these, 16 evaluations were entirely new to the program. Facilitating Positive Points System workshops was an extremely effective method for attracting new growers to the program and encouraging continuing growers to complete additional PPS evaluations.

Table 5. Number and acreage of PPS evaluations over time.

Parameter	Year						
	1996	1997	1998	1999	2000	2001	2002
No. of Evaluations	29	31	42	48	44	54	76
Block Evaluated (Ac)	5,856	8,722	10,766	13,530	10,631	10,715	12,206
Farm Evaluated (Ac)	16,209	18,381	23,732	25,433	22,154	24,697	33,496
Total Area Managed (Ac)	19,655	29,319	39,355	43,303	40,000	40,892	54,563

The acreage evaluated increased from 5,856 to 12,206 from 1996 to 2002. The acreage managed by PPS growers increased from 19,655 to 54,563 from 1996 – 2003 (Figure 2). determined that the acreage involved with the Positive Points System is significant (Figure 2). This data has been adjusted so that acreage is not double counted. When looking at acreage managed over the whole life of the PPS and adjusting for duplicate companies, the PPS has reached grower managing 68,000 acres over the last 7 years.



**Figure 2. The acres impacted by the Positive Points System.**

### 3.2 Analyze PPS data

CCVT continues to refine its data capability through improving its database program and through training the staff to use the database. Overall regional scores flattened out over the last several years (Table 6). CCVT believes that this is due to some lower 1<sup>st</sup> year scores entering into the program. There is a clear and distinct difference between the PPS scores of 1<sup>st</sup> time evaluators and the PPS scores of continuing growers (Figure 3).

Table 6. Historical PPS scores.

	PPS Score						
Parameter	1996	1997	1998	1999	2000	2001	2002
Count	29	31	42	48	44	54	76
Min	411	513	596	551	706	379	443
Max	936	995	995	972	967	995	995
Avg	779	789	820	828	807	834	815

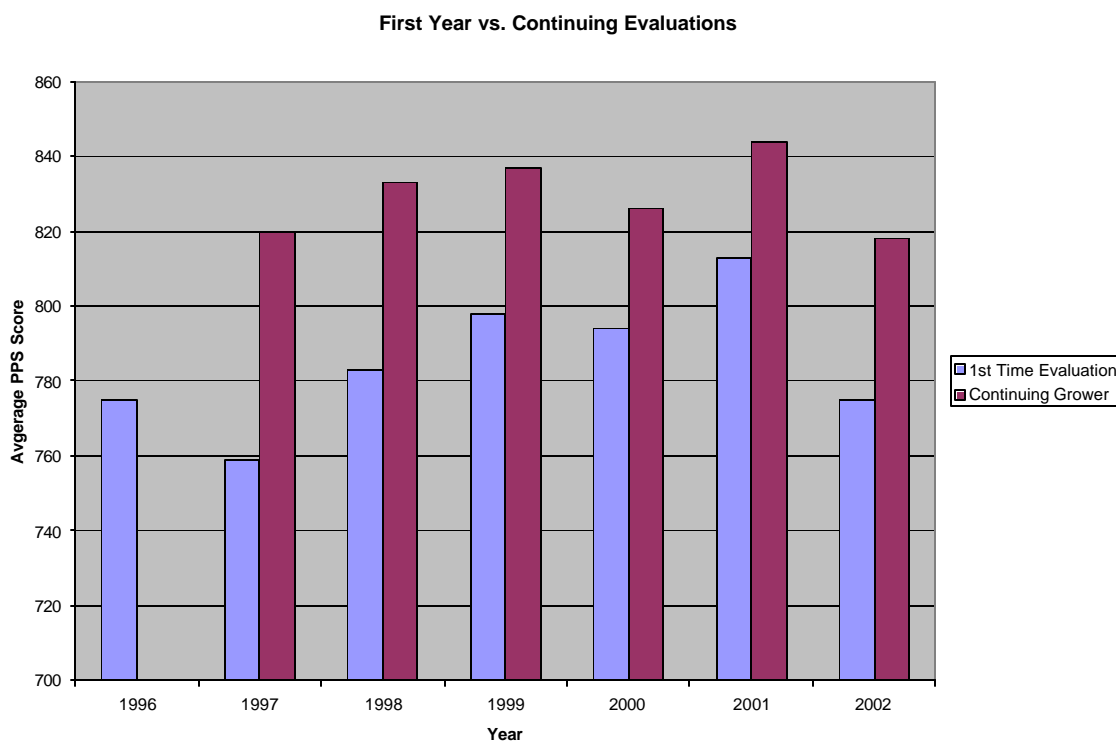


Figure 3. Comparison of First Year vs Continuing PPS Growers' Scores.

## DISCUSSION

**Using the growers as a foundation for education and outreach and utilizing the grower network for planning and implementing programs was essential for this program's success. This was a grower-driven, grass roots effort that succeeded in changing the winegrape growing culture and winegrape growing practices on the**

**Central Coast.** There is no doubt that Central Coast winegrape growers farm differently today than they did 7 years ago, and that the Central Coast Vineyard Team's Positive Points System was instrumental in this systemic change.

The frequency of scores in a higher point range has increased over time (Figure 4).

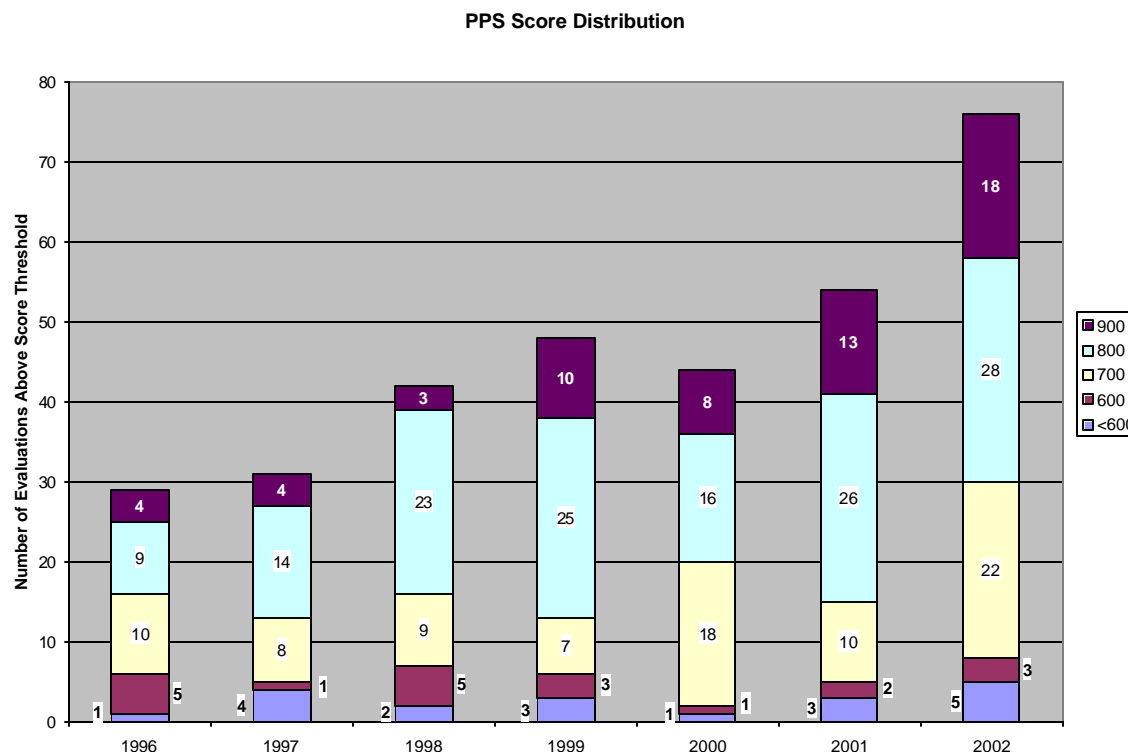


Figure 4. Distribution of PPS scores over time.

CCVT also tracked the overall changes in PPS scores on a site over time. Of the 324 evaluations collected over the last seven years, 204 of them represented repeat evaluations of 64 distinct blocks. Of these distinctly evaluated blocks, 50 PPS scores increased from 5 to 298 points (Table 7).

Table 7. Distribution of point increase for multiple year PPS blocks.

PPS Point Range Increase	No. of Blocks Increasing Their Score
>200	5
150-199	8
100 - 149	12
50-99	11
0-49	14
Total Blocks Increasing Score	50

Unlike other grant funded programs, this program will continue beyond DPR's funding cycle. Through initial seed money and technical expertise, CCVT was able to build and establish the group as a credible institution and currently attracts industry support.

## SUMMARY AND CONCLUSIONS

### Project Summary Form

1. **Project Title:** Reduced Risk Vineyard Practices—Demonstration and Outreach by the Central Coast Vineyard Team
2. **Principal Investigator:** Kris O'Connor, M.S.
3. **Alternate Practices:** Use the integrated farming methods identified in the Positive Points System (i.e., cover cropping, real time irrigation scheduling, pest, weed and disease monitoring and recording, encouraging beneficial habitat refuge, eliminate restricted or Cat 1 materials, canopy management for disease control, etc.) Use the PPS as an education, demonstration, and measurement tool
4. **Summary of Project Successes:** Continuing PPS growers have higher scores (higher degree of sustainable practice adoption) than first year PPS growers. Total acreage managed by PPS growers represent 68,000 acres of Central Coast winegrapes (52% of total Central Coast winegrapes). 17 field days conducted in English and Spanish attracted 425 participants representing over 100,000 acres.

5. Number of Participating Growers	92	12. Number of Field Days	17
6. Total Acreage in Project <sup>1</sup>	68,000	13. Attendance at Field Days	425
7. Project Acreage Under Reduced Risk <sup>2</sup>	28,000	14. Number of Workshops and Meetings	5
8. Total Acres of Project Crop (Central Coast)	130,000	15. Workshop Attendance	147
9. Non-Project Reduced Risk Acres <sup>3</sup>	?	16. Number of Newsletters	4
10. Number of Participating PCA's	10	17. Number of Articles	7
		18. Number of Presentations	20

11. **Cost Assessment:** Not available with this project.

19. **Other Outreach Activities:** CCVT's website [www.vineyardteam.org](http://www.vineyardteam.org) has been established and maintained. CCVT is also getting involved with Agriculture in Schools programs targeting the community and youth.

### Additional Comments

**Positive Points System as a Metric.** CCVT has documented the adoption of sustainable practices using the Positive Points System. Not only has CCVT reached a significant acreage, data indicate that growers are adopting new practices. CCVT anticipates this

<sup>1</sup> Acres managed by growers completing Positive Points System evaluations (1996-2002).

<sup>2</sup> Acres specifically evaluated using the Positive Points System (1996 – 2002).

<sup>3</sup> This is an estimated value based on PCA's closely associated with Project Growers.

trend to continue. This is an important method for determining project success because it reflects actual practices that growers use in the vineyard. Improving the database, therefore improving CCVT's analytical capabilities, will allow the PI to learn more useful information from the PPS evaluations.

**Positive Point System as an Educational Tool.** The PPS has been an extraordinary foundation for grower-to-grower outreach, education, and demonstration. Using the PPS as a technical document and using the growers as a communication medium has been extremely effective strategy to communicate information about reduced risk practices. Data suggests that the PROCESS of completing PPS evaluations is educational and the PROCESS encourages growers to farm differently.

**Attendance Statistics and Meeting Evaluations.** CCVT is reaching a significant audience beyond its core membership. A series of Tailgate Meetings typically attracts people representing 15,000 – 30,000 acres. Evaluations indicate that growers will change practices as a result of the meeting.

**Strategizing CCVT's Future.** CCVT has reached the major management companies and major acreage on the Central Coast. This clearly has the potential for the greatest impact and change in land use and pesticide use. Unfortunately, these do not represent the growers with the lower PPS scores. Growers with the lowest scores are those who are new to the industry and represent relatively small acreage. Unfortunately, these tend to be the most difficult growers to reach. CCVT is cooperating with regional groups to attract smaller, newer growers to the PPS program through additional PPS workshops.

In addition, CCVT needs to link with the PCA community. This has been a fairly weak part of the program and the group is targeting PCA breakfast meeting to discuss the PPS.

CCVT is filling the need for Spanish education. This year CCVT will address irrigation, weed identification, and pest identification. When the PPS translation is complete, this will be an important tool for Spanish education. The group is still learning about its resources for spanish education programs.

CCVT is redesigning its website to incorporate the new and changing information that needs to be disseminated.

Up until now, CCVT has not collected pesticide use data. Anecdotally, CCVT knows that the grower that has a PPS score of 950 uses less pesticides than the grower with a 600 scores, but CCVT does not have any data to support this. This is a time consuming and challenging task outside of the existing outreach, education, and demonstration programs. Nevertheless, CCVT is pursuing funding sources to look at the pesticide use of a sample of PPS cooperating growers to determine if there is a link.

## **APPENDICES**

### **List of Publications Produced**

- CCVT Newsletters
- Tailgate Meeting
- Articles